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ABSTRACT

This brief report summarizes a longer document with the same title. Many colleges and universities, in responding to public demand for higher education and the external challenges it creates, are employing Total Quality Management (TQM) techniques to improve quality, increase productivity, and decrease cost. The quality improvement process itself (the tools for problem identification and developing solutions), largely ignored in the past by academic organizations, is now being studied and applied. The TQM process involves the complete transformation to quality requiring top-level commitment followed by substantial and comprehensive reeducation of all personnel. In addition, the administration must develop a cooperative climate for change and recognize that the faculty play the most important role in developing the concept of continuous quality improvements and other ideas about TQM as they might apply to academic activity. The report examines what quality is and what it requires, the technical system and tools for improving quality, and the type of administrative system required to allow the quality process to be successful. Finally discussed is the process of improving academic quality in the curriculum and classroom, as well as its assessment, while looking towards the student as the beneficiary. Contains seven references. (GLR)

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Quality
Transforming Postsecondary Education

Ellen Earle Chaffee and Lawrence A. Sherr

The last decade has brought unprecedented public demand for higher quality in colleges and universities. External agencies and the public have lost confidence in higher education: We might be "for" quality, but in many eyes we do not "do" quality. Moreover, we cost too much.

To deal with these external challenges, a rapidly increasing number of colleges and universities are borrowing an approach from business called Total Quality Management (TQM), Total Quality, the Deming Management Method, Kaizen, Continuous Quality Improvement, or other terms (Cornesky et al. 1990, 1991; Seymour 1992; Sherr and Teeter 1991).

What Is TQM?

TQM is a comprehensive philosophy of living and working in organizations that emphasizes the relentless pursuit of continuous improvement. It encompasses an extensive array of tools for implementation. Its essence can be simplified to three ideas: defining quality, improving the organization's work performance (or "technical system"), and improving its administrative system.

The fundamental purposes of TQM are to improve quality, increase productivity, and decrease cost. Making the transformation to TQM signifies two basic changes for postsecondary institutions: (1) from asserting that we exemplify quality to a commitment that, no matter how good we are, we can and will continuously improve, and (2) from promising to offer greater quality in exchange for more money to a commitment that we can and will find ways to increase quality *and* decrease cost. These changes, fully implemented, would require substantial cultural change throughout the campus.

What Is Quality?

Quality in design, quality output, and a quality process are all necessary components of quality. Quality in design relates to both the output (for example, an academic program that meets students' needs) and the process (for example, how the curriculum, faculty, equipment, scheduling, and other factors combine to effect the program). Quality output means achieving the desired result; for example, all pharmacy graduates pass their examination for licensure. A quality process means that all the steps within the organization's functioning from beginning to end work effectively toward the desired goals, with each step adding value.

In academic organizations, we have paid considerable attention to quality output (outcomes assessment) and quality in design (curriculum design, transfer of credit). We tend not to think about a quality process. The emphasis on quality output is inadequate because we cannot inspect quality into a product or service at the end of the line. Once a product is made or a service rendered, the only way to improve it is to do it over. On the other hand, if the process is properly designed and functional, quality is built into the result.

Inputs are a favorite proxy for quality in higher education. Inputs are important indeed, but they do not create or measure quality. Design, processes, and outputs define appropriate inputs. Proper inputs maximize the system, while improper inputs limit the system. Therefore, it is more sensible to think of inputs as "proper" or "appropriate" than as part of the definition of "quality."

From the perspective of improving quality, an institution is a collection of processes. Knowing why a process exists is the first step to improving it. Often the purpose of a process was long ago forgotten, and the process has taken on a life of its own. For example, many campuses continue to require the dean's signature on a student's registration card, although often the dean no longer even sees the card, much less provides the advisory or regulatory service that the signature was intended to represent. In addition to having a reason for existence, all processes also exist to meet the needs of the people they are intended to serve. An institution must determine the reason for each process, the people it is intended to serve, and what those people want and need.

What Is the Process for Improvement?

The conceptual and operational tools that TQM offers for identifying problems, finding their root causes, and eliminating those causes are often called the "quality improvement process." The improvement of quality is itself a process--the process of applying the scientific method to your work. The literature on TQM often refers to this idea as the Shewhart cycle, the "Plan-Do-Check-Act cycle," or "the PDCA cycle." First, *plan*. Spend adequate effort to understand the nature and causes of a problem by collecting data on it. Use the data to develop a theory for improving the process: If we do such and such, the process will improve in these ways for these reasons. Then *do*--try your solution in a limited way to be sure it works--and *check*: Did the solution work as intended, or does it need revision? Collect data at this stage too to be sure that the new process is better than the old one. Finally, *act*. When you are satisfied with the results, implement your solution permanently in all areas where it is relevant. Whether the experiment works or not, go through the PDCA cycle again for continuous improvement.

TQM offers a number of analytical tools to use in the PDCA cycle, including flow charts, run charts, Pareto charts, and cause-and-effect diagrams. Process improvement is based on several key ideas:

- You cannot inspect quality into a product or service at the end of the line. Quality requires not just the detection of defects, but also their prevention. It requires elimination of unnecessary steps and assurance of appropriate procedures.
- All work is a process. The details of organizational processes are important because they are the substance of organizational work that ultimately produces the results. If the details are wrong, the process is wrong. If the process is wrong, the results are wrong. Quality requires attention to detail.
- You cannot improve a process without data. And often the data yield surprises.
- Common causes of problems are inherent in every process and are not attributable to the worker.
- Special causes of problems come from exceptions to the normal process. Eliminating them requires detecting them as quickly as possible.
- Adding steps to a process adds opportunities for new problems. Make each process as simple as possible to improve quality.

How Does One Administer for Quality?

Some fundamental points of view characterize the administration of an organization oriented toward TQM:

- The primary job of administration is to remove the barriers that prevent people from achieving quality work processes. Administrators must listen.
- When something goes wrong, the most appropriate and productive first assumption is that the process needs improvement. Making this assumption requires changing the habit of blaming the person who is working in the process.
- The most valuable knowledge about how to improve a process resides in the people who work in the process. Accessing this knowledge requires a supportive climate in which people are free of fear. Taking full advantage of it requires cross-functional teams of people who work at various stages in the process.
- Cooperation must replace competition as the operating premise of the organization. Supporting cooperation will require many substantive changes.
- Administrators must entrust the people who work in a process with the opportunity and the authority to improve it.
- The value of education and training for all cannot be overestimated.

What about Academic Quality?

The faculty will play the most important role in developing the concept of continuous quality improvement and other ideas about TQM as they might apply to academic activity. Faculty must resolve several vitally important questions. To what extent and in what ways are faculty comfortable treating students as beneficiaries? Is it feasible and useful to emphasize the improvement of quality and an orientation toward process in assessment, rather than an orientation toward accountability and outcomes? What would be the implications of relaxing departmental boundaries to encourage more serious examination of the multidisciplinary process of education as students experience it? Can and should faculty incentive systems become more responsive to the faculty's efforts to improve instruction?

How Can a Campus Continuously Improve?

A complete transformation to quality requires top-level commitment, followed by substantial and comprehensive reeducation of all personnel. The transformation requires time, effort, and willingness to change. It involves up-front investment, but in the long run it reduces cost by increasing productivity. The quality-driven organization meets the needs of the people it serves, both within and without.

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